

Remarks

In the Office Action mailed September 27, 2004, Claims 1-7, 10-13 and 15-20 were rejected and claims 8-9, and 14 were objected to. Applicant respectfully traverses the rejections and requests reconsideration of the pending claims.

Specifically, the Office Action again rejects claims 1, 7 and 10 under 35 USC 102(e) as being anticipated by Kang et al. (US Patent No. 5978440). In support of the prior rejections, the Office Action comments on Applicant's prior arguments.

With respect to independent claim 1, Kang et al. does not disclose the steps of (Emphasis added):

*acquiring data corresponding to a number of **horizontal slice images**, ...;
defining a **vertical region of interest** from the data; and
constructing a **vertical slice image** based on the data falling within the vertical region of interest.*

The Office Action states that there is "no definition in the claim that defines a vertical slice image different from the synthesis height projection image disclosed in Kang". Applicant's respectfully disagree and suggest the Examiner read the specification that provides adequate definition of the 'vertical region of interest' as well as the 'vertical slice image'. See Figures 1 and 2 as well as pages 5-6 and 8-9. The independent claim in question uses the distinct terms 'vertical slice image' and 'horizontal slice image', the relative orientations of which are clearly set forth in the specification.

The Office Action also suggests that the "vertical slice image" is a synthesized height projection image at height h. The Office Action also states that the 'vertical region of interest' in Kang is defined as a desired height plane spaced apart from the focal plane. For example, the Office Action further defines the vertical region of interest at desired vertical planes ($Z=0.4$, $Z=0.2$ and at $Z=0$). However, the Office Action also maintains that the horizontal slice) has the same orientation as the vertical slice (See Fig 2, 3, and 12 in the Kang reference). Thus, it appears the Office Action is attempting to use same orientation in Kang to define vertical slice image and horizontal slice image.

Applicants kindly ask Examiner to show in Kang where it teaches both a horizontal slice image and a vertical slice image, noting that horizontal and vertical are generally orthogonal to one another.

In addition, independent claim 1 requires “constructing a vertical slice image based upon data (from the horizontal slice image) falling within the vertical region of interest”. Nowhere in Kang et al disclosure is a vertical slice image constructed. The various embodiments disclosed in the Kang et al. reference show construction of cross-sectional images of height planes (i.e. horizontal images) or construction via synthesis of an angle image plane with angles up to 60 degrees.

For the aforementioned reasons, and other differences between the claimed invention and the Kang et al. reference, any rejection based on the Kang et al. reference is inappropriate. Claims 7 and 10 are dependent claims depending from independent claim 1. Applicants respectfully traverse these rejections for the same reasons Kang et al. fails to anticipate claim 1 outlined above.

Claims 2-6, and 11-13 15-20 were also rejected under 35 USC 103(a) as being unpatentable over Kang et al. as applied to claim 1, in view of various secondary references. Applicants respectfully traverse these rejections for the same reasons Kang et al. fails to anticipate independent claim 1 outlined above.

No new matter has been added and no new claim fees are due since the number of pending claims does not exceed the number previously paid for. The Commissioner is also hereby authorized to charge to Deposit Account Number 20-0515 for any fee deficiency, or to credit this Deposit Account Number for any overpayment.

Respectfully Submitted,



Robert J. Hampsch
Reg. No. 36,155
Attorney for Applicant

Atty. Docket: 1677-US
Telephone : 617-422-2919
Fax : 617-422-2290